

## SECTION 07 46 33

### PLASTIC SIDING

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Capped PVC Board Cladding and Accessories.

##### 1.2 RELATED SECTIONS:

- A. Section 06 11 00 – Rough Carpentry.
- B. Section 07 25 00 – Weather Barriers.

##### 1.3 DEFINITIONS:

- A. Rainscreen: An exterior open-joint cladding system incorporating a continuous air cavity created by furring, a water-resistive barrier to manage water intrusion through drainage and ventilation, and a physical air barrier (e.g. sheathing) to prevent air leakage into the building.
- B. RVFS: Rear-ventilated façade system.
- C. WRB: Water-resistive barrier. A code-acceptable material behind the capped PVC boards that prevents moisture in the air cavity from intrusion into the exterior building wall assembly.

##### 1.4 SUBMITTALS

- A. Submit in accordance with requirements of Section 01 30 00 - Administrative Requirements.
- B. Product Data: For each product specified include the following:
  - 1. Manufacturer's technical product data, including component descriptions, construction details, and test results showing compliance with specified performance criteria.
  - 2. Manufacturer's surface preparation and installation instructions.
  - 3. Safety Data Sheets (SDS).

- C. Sustainability Submittals:
  - 1. Product Data: For recycled content, indicated pre-consumer recycled content and cost.
- D. Verification Samples: Provide two samples of specified board, full board width by minimum 4 inches in length, including the selected color and finish.
- E. Informational Submittals:
  - 1. Installer qualifications.
  - 2. Product test reports.
  - 3. Sample warranties.
- F. Closeout Submittals:
  - 1. Maintenance data for installed system.

## 1.5 QUALITY ASSURANCE

- A. Installer's Qualifications: An entity with demonstrated experience installing systems similar in scope and complexity to those specified.
- B. Mock-Up: Arrange for the construction of a mock-up of the products specified in this section. Example must include one cladding section for each type specified, including the selected color and finish. Owner and Architect will verify acceptance of products and workmanship.
  - 1. Accepted mockups may be incorporated into the work.
  - 2. Provide mockups as indicated on the drawings.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials and products in accordance with the manufacturer's instructions and recommendations and industry standards.
- B. Store all materials in the manufacturer's original packaging until ready for installation. Protect all products from damage or exposure to adverse weather conditions.
  - 1. Store products in shaded or cool location.

## 1.7 PROJECT CONDITIONS

- A. Schedule work around the ambient conditions required by the manufacturer. Do not perform work outside manufacturer's recommended limits for environmental conditions.
- B. Prior to fabrication, verify that dimensions are consistent with those found in the construction drawings. Where discrepancies exist, confirm the proper dimensions with the Architect before proceeding with work.

## 1.8 WARRANTY

- A. Warranty on Cladding Material: Manufacturer agrees to replace or refund the purchase price of nonconforming capped PVC boards that fail within the specified warranty period.
  - 1. Failure Methods: Splitting, cupping, splintering, blistering, peeling, flaking, cracking, rotting or structural damage from termites or fungal decay.
  - 2. Residential Warranty Period: Limited Lifetime.
  - 3. Commercial Warranty Period: 30 years from date of purchase.
- B. Special Warranty on Cladding Finishes: Manufacturer agrees to replace or refund the purchase price of nonconforming capped PVC boards that show evidence of deterioration of factory-applied color beyond specified limit within the specified warranty period.
  - 1. Color Fade: Not to exceed 5 Delta E (CIE) units.
  - 2. Residential Warranty Period: 50 years from date of purchase.
  - 3. Commercial Warranty Period: 30 years from date of purchase.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design Manufacturer: TimberTech, an AZEK Building Products Brand.
  - 1. Address: 1330 W Fulton Street, Suite 350 Chicago, IL 60607.
  - 2. Phone: (877) 275-2935
  - 3. Website: [www.azek.com](http://www.azek.com)
- B. Manufacturer List:
  - 1. Manufacturer:
- C. Substitution Limitations:
  - 1. Submit substitution requests in accordance with provisions of Section 01 60 00.
  - 2. Single manufacturer to provide, from a single source, primary products and accessories specified in this section.

### 2.2 PERFORMANCE REQUIREMENTS:

- A. Physical Performance: Provide cladding boards in accordance with ASTM D7254 and ASTM D3679, and ICC-ES AC227.
  - 1. Heat Shrinkage: Less than 0.2% linear shrinkage when tested in accordance with ASTM D1042.
  - 2. Impact Resistance: Pass; when tested at 265/220 (in·lb) mean failure energy in accordance with ASTM D4226.
  - 3. Surface Distortion: No effect at 120°F or at maximum developed temp of 165°F when tested in accordance with ASTM D3679 Section 6.12.
  - 4. Coefficient of Thermal Expansion: Maximum  $2.72 \times 10^{-5}$  in/in/°F; when tested in accordance with ASTM D696.

- B. Rate and Extent of Burn: No sustained combustion when tested in accordance with ASTM D635.
- C. Surface-Burning Characteristics: Meet the following values when tested in accordance with ASTM E84:
  - 1. Class A Flame-Spread Index: 0 to 25.
  - 2. Class B Flame-Spread Index: 26 to 75.
- D. Ignition Resistance: Cellular PVC core boards pass NFPA 268.
- E. Environmental Performance:
  - 1. Water Absorption: No observed water droplets when tested in accordance with ASTM D570 & AATCC 127.
  - 2. UV Resistance: Pass at least 2000 hours of Xenon-Arc exposure when tested in accordance with ASTM D2565 Cycle 1.
  - 3. Fungus Decay Resistance: Pass; when tested in accordance with ASTM D2017. Boards do not contain cellulosic material.
  - 4. Termite Resistance: Pass; when tested in accordance with ASTM D3345. Boards do not contain cellulosic material.
  - 5. Moisture Effect: Not prone to absorption, no adjustments when tested in accordance with ASTM D7032.
  - 6. Freeze Thaw Resistance: Less than 10% effect, no adjustments when tested in accordance with ASTM D7032.
- F. Recycled Content: Greater than 45% combined pre-consumer (post-industrial) and post-consumer by weight.

### 2.3 CAPPED PVC BOARDS

- A. Capped PVC Boards: Cellular PVC core boards with PVC-based capping material and complying with ASTM D3679.
  - 1. Basis of Design Product: Vintage Collection Cladding, by TimberTech, an AZEK Building Products Brand.
  - 2. Physical Characteristics:
    - a. Edge: Square; .0125-inch corner fillet radius.
    - b. Thickness: 1 inch.
    - c. Width: 3.5 inches.
    - d. Width: 5.5 inches.
    - e. Width: 7.25 inches.
    - f. Length: 16 feet.
    - g. Length: 20 feet.
    - h. Color: Coastline.
    - i. Color: Cypress.
    - j. Color: Dark Hickory.
    - k. Color: English Walnut.

- l. Color: Mahogany.
    - m. Color: Weathered Teak.
- B. Capped PVC Boards: Cellular PVC core boards with PVC-based capping material and complying with ASTM D3679.
  - 1. Basis of Design Product: Harvest Collection Cladding, by TimberTech, an AZEK Building Products Brand.
  - 2. Physical Characteristics:
    - a. Edge: Square; 0.125-inch corner fillet radius.
    - b. Thickness: 1 inch.
    - c. Width: 5.5 inches.
    - d. Width: 7.25 inches.
    - e. Length: 12 feet.
    - f. Length: 16 feet.
    - g. Length: 20 feet.
    - h. Color: Brownstone.
    - i. Color: Kona.
    - j. Color: Slate Gray.

## 2.4 ACCESSORIES

- A. Fasteners: Provide fasteners as recommended by the RVFS manufacturer.
  - 1. Basis of Design Product: Cortex, by TimberTech, an AZEK Building Products brand.
    - a. Material: Electric coated epoxy painted carbon steel.
    - b. Size: Minimum #10 x 2 inch carbon steel fasteners.
    - c. Size: Minimum #10 x 2-1/2 inch carbon steel fasteners.
    - d. Installation: Counter-bored.
    - e. Corrosion Resistance: Pass; when tested in compliance with ASTM B117.
    - f. Plug: Match board colors.
  - 2. Basis of Design Product: TOPloc, by TimberTech, an AZEK Building Products brand.
    - a. Material: Stainless Steel; Grade 305.
    - b. Size: Minimum #10 x 2-1/2 inch stainless steel fasteners.
    - c. Head Color: Color matching board.
    - d. Installation: Face-fastened.
- B. Weather-Resistive Barrier: Provide WRB in compliance with Manufacturer's recommendations, authorities having jurisdiction, and Section 072500 "Weather Barriers."
- C. Wood Furring: Provide 2X4 wood furring in compliance with Manufacturer's recommendations, authorities having jurisdiction, and Section 061100 "Rough Carpentry."

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates to receive the RVFS work and conditions under which the work will be performed including the following:
  - 1. Wall sheathing is in place and properly installed.
  - 2. WRB (or air barrier) is in place, continuous, and properly installed.
  - 3. Wood furring is level, plumb, and true to line, correctly placed, securely attached to building substrates. Maximum furring spacing, whether horizontal or vertical, not to exceed 16 inches on center.
  - 4. Air cavity is continuous with minimum 1 ½ inch unobstructed width. Unobstructed air intake (bottom) and exit (top) of at least 1 ½ inch.
  - 5. Flashings for penetrations, head of openings, and base of air cavity are properly installed to redirect moisture to the exterior.
  - 6. Wood blocking and insect screens are in place as required to prevent intrusion by pests and not diminish ventilation/drainage performance.
- B. Do not begin work until adjacent substrates have been properly prepared to receive work specified in this section. Commencement of RVFS work will constitute acceptance of substrates to receive the work.

### 3.2 PREPARATION

- A. General: Comply with manufacturer's printed installation instructions, clean substrates of projections and substances detrimental to application.
- B. Protect adjacent substrates not to receive the RVFS.

### 3.3 INSTALLATION

- A. General: Install in accordance with manufacturer's current installation instructions, industry recognized best practices, all code bodies having jurisdiction, and approved shop drawings.
  - 1. Do not install damaged products.
  - 2. Refer to manufacturer's published technical data for expansion and contraction due to changes in temperature.
- B. Securely attach capped PVC boards to furring substrates. Fastener size, number, spacing, and minimum dimensions from board edges and ends according to RVFS manufacturer's recommendations.
  - 1. Cut and rout capped PVC boards using only approved carbide-tipped blades, to preclude frayed edge cuts.
  - 2. Cut board ends square. Miter cuts at corners are acceptable.
  - 3. Install fasteners perpendicular to cladding board substrates and flush with board surface.
- C. Horizontal capped PVC Board Orientation:
  - 1. Determine and begin at lowest point of cladding installation.
  - 2. Butt joints to occur only over furring and centered on furring. As capped PVC board courses are added, stagger butt joints in a consistent "stair step" manner.

- a. Board lengths to span a minimum of three furring members.
- b. Gapping: Refer to RVFS manufacturer's published technical data for spacing dimensions.
  - 1) End-to-End Boards: No gap.
  - 2) Between Board Edges: 1/8 inch.
  - 3) Boards and Adjacent Materials: 1/8 inch.
  - 4) Board to Roof: 1/8 inch.

### 3.4 CLEANING AND PROTECTION

- A. Clean and remove all stains, grime, or other soils using manufacturer's recommended methods. Only use materials and methods approved by the manufacturer for use on the finishes specified.
- B. Damaged products must be repaired or replaced prior to substantial completion.
- C. Protect installed products until completion of work specified in this section.

END OF SECTION 074643